

### **Amendments to the Claims**

Applicants submit this Preliminary Amendment with the National Phase application enclosed herewith, under 35 USC § 371(g), and requests that the following amendments be entered. This listing of claims will replace all prior versions and listings of claims in the application.

#### **Listing of Claims:**

1. (currently) A method for analyzing one or a plurality of digital images using a plurality of software agents, comprising:
  - ~~A program for~~ initializing and assigning a plurality of agents to at least one of said images;
  - ~~Means for providing~~ said agents with means to perceive at least one of said images at one or a plurality of scale representations; and
  - ~~Means for providing~~ said agents with means to modify pixel values of said images.
2. (currently amended) The method as claimed in claim 1, wherein each said agents is further provided with ~~comprise~~:
  - Sensors to locally sense information comprised in said images;
  - Decision making means for allowing said agents to take action in accordance to specific mental states; and
  - Processing means for processing said information perceived by said sensors.

3. (currently amended) The method as claimed in claim 1, wherein said step of initializing and assigning further comprises the steps of:
  - Preprocessing at least one of said images;
  - Producing spatial coordinates from results of said step of preprocessing; and
  - Assigning said agents according to said spatial coordinates.
4. (original) The method as claimed in claim 2, wherein said agents have the capability to further adapt said sensors by changing configuration of said sensors.
5. (original) The method as claimed in claim 4, wherein said step of changing configuration of said sensors comprises at least changing size of said sensors.
6. (original) The method as claimed in anyone of claims 4 and 5, wherein said step of changing configuration of said sensors comprises changing resolution of said sensors.
7. (original) The method as claimed in claim 1, wherein said means to perceive comprises:
  - Analyzing said images at a first scale representation by means of at least one of said agents;
  - Analyzing said images at a second scale representation by means of at least one other of said agents; and

- Exchanging information between said agents at said first and second scale representations.
8. (original) The method as claimed in claim 7, wherein said step of exchanging information further allows for at least one of said agents to adapt itself.
9. (original) The method as claimed in claim 1, wherein said scale is a spatial scale.
10. (original) The method as claimed in claim 1, wherein said scale is a semantic scale.
11. (currently amended) The method as claimed in any one of claims 2, 4, and 5 [[,6,]] wherein said sensors provide a spatial multiscale representation of said image, wherein said multiscale representation simultaneously provides said agents with image information at every considered spatial scale.
12. (original) The method as claimed in claim 11, wherein said multiscale information provides a multiscale signature and wherein said signature further allows said agent to classify said information.
13. (currently amended) The method as claimed in claim 12, wherein said step of classifying information is achieved by means of artificial neural networks.

14. (currently amended) A method for contour recognition in one or a plurality of digital images by means of one or a plurality of software agents, comprising the steps of:

- Initializing and assigning at least one of said agents to an image, said agents comprising at least one sensor;
- Said Providing said agents with means for recognizing said contours in said image by means of said sensors; and
- Said Providing said agents with means for drawing said recognized contours in said image.

15. (currently amended) An apparatus for analyzing one or a plurality of digital images, comprising:

- Image data input means;
- At least one processing node, said processing node comprising memory and processing unit;
- A method Means for analyzing said images ,said according to the method as claimed in claim 1; and
- Display means for displaying said images.

16. (new) The method as claimed in claim 6, wherein said sensors provide a spatial multiscale representation of said image, wherein said multiscale representation simultaneously provides said agents with image information at every considered spatial scale.